

What is Claimed:

1. A method for coordinating the operation of a database management system and a common language runtime executing on a common server, said method comprising the database management system hosting the common language runtime wherein the common language runtime executes requests for at least one system resource via an application programming interface of the database management system.
2. The method of claim 1 wherein said at least one system resource is a memory resource.
3. The method of claim 2 wherein
said common language runtime requests a memory resource via the application programming interfaces of the database management system,
said database management system coordinates the request with:
at least one other request on a memory management system for said database management system, and
a current state of memory on the database management system,
to ensure the database management system and the common language runtime use only physical memory to execute said requests.

4. The method of claim 2 wherein said common language runtime requests a memory resource via the application programming interfaces of the database management system, and the database management system manages the request to allocate a block of physical memory where, had the common language runtime requested said memory resource directly from an associated operation system, the common language runtime would have been allocated a block of virtual memory.
5. The method of claim 1 wherein said database management system requests an allocation of memory from an associated operating system where said request is made on behalf of said common language runtime.
6. The method of claim 1 wherein said at least one system resource is an execution of a first thread.
7. The method of claim 6 wherein said common language runtime requests an execution of a first thread via the application programming interfaces of the database management system, and the database management system manages the request to assign the first thread to a processor, ensure it is the only thread executing on that processor, and execute it non-preemptively where, had the common language runtime requested said execution of said first thread directly from an associated operation system, the first thread would have been allocated to a processor preemptively and may not have been the only thread executing on that processor.

8. The method of claim 1 wherein said database management system requests an execution of a first thread from an associated operating system where said request is made on behalf of said common language runtime.
9. The method of claim 1 wherein said at least one system resource is a secured data resource.
10. The method of claim 9 wherein said common language runtime requests a secured data resource via the application programming interfaces of the database management system, and the database management system manages the request to grant or deny access to said data resource based on a predefined criteria.
11. The method of claim 1 wherein said database management system requests a secured data resource from an associated operating system where said request is made on behalf of said common language runtime.
12. The method of claim 1 further comprising said database management system providing the common language runtime with a security policy that governs:
 - whether a set of resources can be accessed by an execution code running in said common language runtime; and
 - whether a set of operations can be performed by said execution code running in said common language runtime.

13. The method of claim 12 further comprising said database management system enabling said execution code to specify a set of Code Access Security (CAS) permissions that are used by the database management system to:

determine whether said execution code is permitted to access a specific resource outside of the control of the database management system; and

specify whether said execution code is permitted to perform operations that are identified as potentially compromising a measurement of robustness of a process operating in said database management system.

14. The method of claim 13 further comprising:

setting up a security policy that governs the common language runtime; and
enforcing the set of Code Access Security (CAS) permissions.

15. A system for coordinating the operation of a database management system and a common language runtime executing on a common server, said system comprising a subsystem by which the database management system hosts the common language runtime, wherein the common language runtime executes requests for at least one system resource via an application programming interface of the database management system.

16. The system of claim 15 wherein said at least one system resource is a memory resource.

17. The system of claim 16 further comprising a subsystem whereby:

said common language runtime requests a memory resource via the application programming interfaces of the database management system,

said database management system coordinates the request with:

at least one other request on a memory management system for said database management system, and

a current state of memory on the database management system,

to ensure the database management system and the common language runtime use only physical memory to execute said requests.

18. The system of claim 16 wherein said common language runtime requests a memory resource via the application programming interfaces of the database management system, and the database management system manages the request to allocate a block of physical memory where, had the common language runtime requested said memory resource directly from an associated operation system, the common language runtime would have been allocated a block of virtual memory.

19. The system of claim 15 wherein said database management system requests an allocation of memory from an associated operating system where said request is made on behalf of said common language runtime.

20. The system of claim 15 wherein said at least one system resource is an execution of a first thread.

21. The system of claim 20 wherein said common language runtime requests an execution of a first thread via the application programming interfaces of the database management system, and the database management system manages the request to assign the first thread to a processor, ensure it is the only thread executing on that processor, and execute it non-preemptively where, had the common language runtime requested said execution of said first thread directly from an associated operation system, the first thread would have been allocated to a processor preemptively and may not have been the only thread executing on that processor.
22. The system of claim 15 wherein said database management system requests an execution of a first thread from an associated operating system where said request is made on behalf of said common language runtime.
23. The system of claim 15 wherein said at least one system resource is a secured data resource.
24. The system of claim 23 wherein said common language runtime requests a secured data resource via the application programming interfaces of the database management system, and the database management system manages the request to grant or deny access to said data resource based on a predefined criteria.

25. The system of claim 15 wherein said database management system requests a secured data resource from an associated operating system where said request is made on behalf of said common language runtime.

26. The system of claim 15 further comprising a subsystem by which said database management system provides the common language runtime with a security policy that governs:

whether a set of resources can be accessed by an execution code running in said common language runtime; and

whether a set of operations can be performed by said execution code running in said common language runtime.

27. The system of claim 26 further comprising a subsystem for said database management system to enable said execution code to specify a set of Code Access Security (CAS) permissions that are used by the database management system to:

determine whether said execution code is permitted to access a specific resource outside of the control of the database management system; and

specify whether said execution code is permitted to perform operations that are identified as potentially compromising a measurement of robustness of a process operating in said database management system.

28. The system of claim 27 further comprising:
 - a subsystem for setting up a security policy that governs the common language runtime; and
 - a subsystem for enforcing the set of Code Access Security (CAS) permissions.
29. A computer-readable medium comprising computer-readable instructions for coordinating the operation of a database management system and a common language runtime executing on a common server, said computer-readable instructions comprising instructions for the database management system to host the common language runtime whereby the common language runtime executes requests for at least one system resource via an application programming interface of the database management system.
30. The computer-readable instructions of claim 29 further comprising instructions whereby at least one system resource is a memory resource.
31. The computer-readable instructions of claim 30 further comprising instructions whereby:
 - said common language runtime requests a memory resource via the application programming interfaces of the database management system,
 - said database management system coordinates the request with:
 - at least one other request on a memory management system for said database management system, and
 - a current state of memory on the database management system,

to ensure the database management system and the common language runtime use only physical memory to execute said requests.

32. The computer-readable instructions of claim 30 further comprising instructions whereby common language runtime requests a memory resource via the application programming interfaces of the database management system, and the database management system manages the request to allocate a block of physical memory where, had the common language runtime requested said memory resource directly from an associated operation system, the common language runtime would have been allocated a block of virtual memory.

33. The computer-readable instructions of claim 29 further comprising instructions whereby database management system requests an allocation of memory from an associated operating system where said request is made on behalf of said common language runtime.

34. The computer-readable instructions of claim 29 further comprising instructions whereby at least one system resource is an execution of a first thread.

35. The computer-readable instructions of claim 34 further comprising instructions whereby said common language runtime requests an execution of a first thread via the application programming interfaces of the database management system, and the database management system manages the request to assign the first thread to a

processor, ensure it is the only thread executing on that processor, and execute it non-preemptively where, had the common language runtime requested said execution of said first thread directly from an associated operation system, the first thread would have been allocated to a processor preemptively and may not have been the only thread executing on that processor.

36. The computer-readable instructions of claim 29 further comprising instructions whereby database management system requests an execution of a first thread from an associated operating system where said request is made on behalf of said common language runtime.

37. The computer-readable instructions of claim 29 further comprising instructions whereby at least one system resource is a secured data resource.

38. The computer-readable instructions of claim 37 further comprising instructions whereby common language runtime requests a secured data resource via the application programming interfaces of the database management system, and the database management system manages the request to grant or deny access to said data resource based on a predefined criteria.

39. The computer-readable instructions of claim 29 further comprising instructions whereby database management system requests a secured data resource from an

associated operating system where said request is made on behalf of said common language runtime.

40. The computer-readable instructions of claim 29 further comprising instructions whereby said database management system provides the common language runtime with a security policy that governs:

whether a set of resources can be accessed by an execution code running in said common language runtime; and

whether a set of operations can be performed by said execution code running in said common language runtime.

41. The computer-readable instructions of claim 40 further comprising instructions whereby said database management system enables said execution code to specify a set of Code Access Security (CAS) permissions that are used by the database management system to:

determine whether said execution code is permitted to access a specific resource outside of the control of the database management system; and

specify whether said execution code is permitted to perform operations that are identified as potentially compromising a measurement of robustness of a process operating in said database management system.

42. The computer-readable instructions of claim 41 further comprising instructions for:

setting up a security policy that governs the common language runtime, and
enforcing the set of Code Access Security (CAS) permissions.